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Bit complexity of computing solutions for symmetric hyperbolic systems of PDEs (Extended abstract)

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Abstract

 We establish upper bounds of bit complexity of computing solution operators for symmetric hyperbolic systems of PDEs. Here we continue the research started in our papers of 2009 and 2017, where computability, in the rigorous sense of computable analysis, has been established for solution operators of Cauchy and dissipative boundary-value problems for such systems.

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Keywords

Algebraic real, Bit complexity, Difference scheme, Eigenvalue, Eigenvector, Guaranteed precision, Solution operator, Symbolic computations, Symmetric hyperbolic system, Symmetric matrix

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